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IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claim 15 in accordance with the following:

1-10 (cancelled)

11. (previously presented) A method for data transmission in a wireless communication system, comprising:

emitting a subscriber data signal assigned to a subscriber from at least two antenna devices using a diversity method;

emitting a reference signal assigned to the subscriber from only one of the at least two antenna devices; and

measuring propagation delay of the reference signal to determine runtime critical system parameters for a positional determination of the subscriber.

12. (previously presented) The method according to Claim 11, wherein the reference signal is emitted periodically at predefined time intervals.

13. (previously presented) The method according to Claim 11, wherein the reference signal is emitted aperiodically at time intervals selected at random.

14. (previously presented) The method according to Claim 11, wherein the antenna device used to send the reference signal is switched between the at least two antenna devices.

15. (currently amended) The method according to Claim 14, wherein
when the antenna device used to send the reference signal is switched, the propagation delay is compared for the at least two antenna devices, and
for future propagation delay measurements, the antenna device used to send the reference signal is selected to be the antenna device associated the smaller propagation delay.

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16. (previously presented) The method according to Claim 14, wherein when the antenna device used to send the reference signal is switched, a comparison is made, and

for future propagation delay measurements, the antenna device most closely within line-of-sight of the subscriber is selected.

17. (previously presented) The method according to Claim 11, wherein the positional determination is performed with a timing advance mechanism.

18. (previously presented) The method according to Claim 11, wherein the subscriber data signal and the reference signal are transmitted using a time division multiple access method.

19. (previously presented) The method according to Claim 18, wherein the reference signal is a training sequence transmitted in a time slot used for synchronization.

20. (previously presented) The method according to Claim 19, wherein the wireless communication system is a GSM mobile radio system, and an extended training sequence of a synchronization time slot is used as the reference signal.

21. (previously presented) The method according to Claim 11, wherein the reference signal is selected from a plurality of manufacturer-specific reference signals, and the manufacturer-specific reference signals are stored on a transmit side in a table.

22. (previously presented) The method according to Claim 11, wherein the at least two antenna devices have polarizations orthogonal to one another.

23. (previously presented) The method according to Claim 11, wherein the at least two antenna devices have the same polarization, but are at a fixed distance from one another.

24. (previously presented) The method according to Claim 12, wherein the antenna

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device used to send the reference signal is switched between the at least two antenna devices.

25. (previously presented) The method according to Claim 15, wherein the positional determination is performed with a timing advance mechanism.

26. (previously presented) The method according to Claim 25, wherein the subscriber data signal and the reference signal are transmitted using a time division multiple access method.

27. (previously presented) The method according to Claim 26, wherein the reference signal is a training sequence transmitted in a time slot used for synchronization.

28. (previously presented) The method according to Claim 27, wherein the wireless communication system is a GSM mobile radio system, and an extended training sequence of a synchronization time slot is used as the reference signal.

29. (previously presented) The method according to Claim 28, wherein the reference signal is selected from a plurality of manufacturer-specific reference signals, and the manufacturer-specific reference signals are stored on a transmit side in a table.

30. (previously presented) The method according to Claim 29, wherein the at least two antenna devices have polarizations orthogonal to one another.